

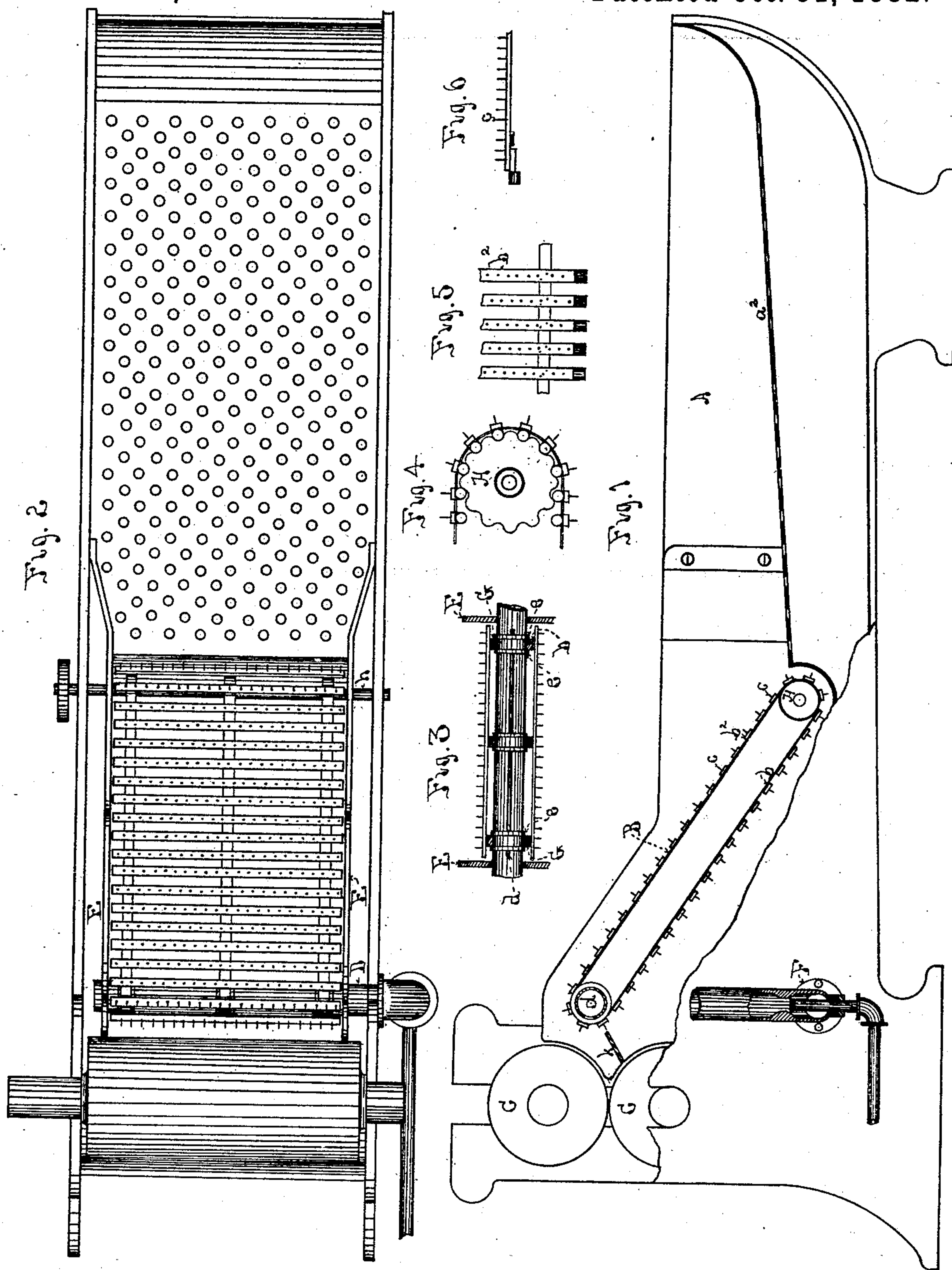
(No Model.)

F. G. & A. C. SARGENT.

WOOL WASHER.

No. 266,899.

Patented Oct. 31, 1882.



Witnesses

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UNITED STATES PATENT OFFICE.

FREDERICK G. SARGENT AND ALLAN C. SARGENT, OF GRANITEVILLE, MASS.

WOOL-WASHER.

SPECIFICATION forming part of Letters Patent No. 266,899, dated October 31, 1882.

Application filed May 2, 1882. (No model.)

To all whom it may concern:

Be it known that we, FREDERICK G. SARGENT and ALLAN C. SARGENT, of Graniteville, in the county of Middlesex and State of Massachusetts, have invented a new and useful Improvement in Wool-Washers, of which the following is a specification.

Our improvement relates to machines in which the wool is put into a bowl containing a scouring-liquid, in which it is permitted to soak, and from which it is taken and conveyed to squeeze-rolls; and its objects are to provide a carrier device to convey the wool from the bowl to the squeeze-roll and freely discharge it thereto, and at the same time saturate it with water. We accomplish these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a side view with part of the side of the bowl and pipe removed. Fig. 2 is a plan. Figs. 3, 4, 5, and 6 are details showing different parts of the machine.

A is the bowl, provided with the inclined bottom a^2 ; B, the carrier, which takes the wool from the liquid in the bowl and carries it up toward the squeeze-rolls C C.

D is a pipe extending across the bowl, supported by the guide-plates E. This pipe is provided with a slot, d , extending nearly the entire width of the carrier. This slot is placed on the back side of the pipe. Placed on the pipe D are collars $e e$, which keep the pulleys G G in place. The pulleys are annular rings of metal, on which the belts b are carried. Attached to these belts are slats b^2 , which are provided with teeth or spines $c c$. This carrier-apron is driven by the pulleys H H, placed on the shaft h , which is driven by a belt from some adjacent machinery. The pipe D is kept supplied with fluid from the tank by the injector F; or a pump may be used, if so desired. By this means a constant pressure of fluid is maintained in the pipe D, so that a jet of water is forced out through the slot d . This jet of water strikes the wool as it is carried over the upper end of the carrier-apron and throws it off the spines.

k is a guide-board inclined so that the wool, as it falls from the carrier, will slide down toward the nip of the rolls.

The operation of the machine may be thus described: The wool, being put into the bowl at the end farthest from the carrier, soaks in the scouring-liquid while it slowly slides toward the carrier little by little. It is taken up by the spines on the slatted apron, and as it is carried up to the rolls the fluid taken up with it flows out, carrying with it a part of the dirt and foreign matter which may be loosened from the fibers. When, however, the wool is about to be given to the squeeze-rolls the jet of water from the pipe D is forced into it again, surcharging it, so that the rolls will, as they nip and squeeze it, cause a rush of water out from among the fibers, which will have sufficient volume to carry out a much larger amount of the foreign substances. By the force of the jet of water from the pipe D much of the dirt adhering to the fibers is loosened, so as to pass readily away with the outflowing fluid. The pulleys on the shaft h may be formed with a corrugated surface, and the slats provided with lugs, as shown in Figs. 4, 5, and 6, if so desired. The carrier will thus be prevented from slipping and the operation of the machine made more certain.

By this construction we are enabled to use an apron provided with spines, without the use of a doffer or danger of having the wool carried completely around with the carrier, for the stream of water issuing from the pipe D will in all cases throw the wool off from the carrier.

What we claim as new and of our invention is—

1. The combination of the tank A and apron-carrier B with the pipe D, provided with the slot d , adapted to throw a stream of water against the wool passing over the carrier and throw it off toward the rolls, substantially as described.

2. The combination of the tank A, the slat-apron provided with spines, and the pipe D, adapted to project the stream and doff the fiber from the apron, substantially as described.

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Witnesses:

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